

21. The method of claim 20 further including the step of determining whether it is necessary to fragment IKE data packets before fragmenting the IKE data packet.

22. A method for intelligently discarding data packets to efficiently manage resources comprising:

receiving a plurality of data packets containing Internet Key Exchange (IKE) information, wherein the packets were transmitted from a transmitting node in a order that can be determined from information contained within the received data packets;

determining from information contained within the received data packets whether any of the received packets have been received in an order that differs from the order in which the packets were transmitted from the transmitting node; and

discarding at least certain of the received packets when a predetermined number of out of order packets have been received.

23. The method of claim 22 further including the step of sending a message to the transmitting node that out of order packets have been received.

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REMARKS

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Date: October 3, 2002

In re Appln. of Swander  
Application No. 10/056,889

CERTIFICATE OF MAILING

I hereby certify that this PRELIMINARY AMENDMENT (along with any documents referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Date:

10/3/2002

William M. Grian



PATENT  
Attorney Docket No. 215242

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Swander

Application No. 10/056,889

Filed: January 25, 2002

For: METHOD AND APPARATUS FOR  
FRAGMENTING AND  
REASSEMBLING INTERNET KEY  
EXCHANGE DATA PACKETS

Art Unit: Unassigned

Examiner: Unassigned

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AMENDMENTS TO CLAIMS  
MADE VIA PRELIMINARY AMENDMENT

AMENDMENTS TO EXISTING CLAIMS:

13. A method for transmitting data packets across a network comprising the steps of:

generating and transmitting an Internet Key Exchange (IKE) packet over a network;  
determining whether a response to the IKE packet was received;  
fragmenting the IKE packet into a plurality of smaller packets when a response is not received; and  
transmitting each of the plurality of smaller packets over a network.

14. The method of claim 13 wherein each of the plurality of small packets contains a header formatted according to the IKE protocol

15. The method of claim 13 wherein the IKE packet contains a header formatted according to the IKE protocol.

16. The method of claim 15 wherein the plurality of smaller packets contain the same information as that contained within the original IKE packet.

17. The method of claim 16 wherein at least one of the plurality of smaller packets contains the header formatted according to the IKE protocol.

18. A method for transmitting data packets across a network comprising the steps of:

generating a data packet containing Internet Key Exchange (IKE) information;  
determining whether fragmentation of the data packet is necessary to successfully transmit the IKE information over a network; and  
fragmenting the data packet if necessary into a plurality of smaller packets that may be transmitted over a network.

19. The method of claim 18 wherein the step of determining whether fragmentation is necessary is not based exclusively on the size of the data packet.

20. A method for resolving transmitting errors associated with transmitting Internet Key Exchange (IKE) packets via protocol stacks that implement the Transmission Control Protocol (TCP), the User Datagram Protocol (UDP), and/or the Internet Protocol (IP) comprising the steps of:

generating a data packet containing IKE data;  
fragmenting the packet with a code module that does not implement the TCP, UDP or IP protocols before the packet is processed by a code module that does implement the TCP, UDP or IP protocols; and  
transmitting the fragmented packet over a network.

21. The method of claim 20 further including the step of determining whether it is necessary to fragment IKE data packets before fragmenting the IKE data packet.

22. A method for intelligently discarding data packets to efficiently manage resources comprising:

receiving a plurality of data packets containing Internet Key Exchange (IKE) information, wherein the packets were transmitted from a transmitting node in a order that can be determined from information contained within the received data packets;

determining from information contained within the received data packets whether any of the received packets have been received in an order that differs from the order in which the packets were transmitted from the transmitting node; and

discarding at least certain of the received packets when a predetermined number of out of order packets have been received.

23. The method of claim 22 further including the step of sending a message to the transmitting node that out of order packets have been received.